2012 年度入学試験問題　　206

情報科学部A方式

1　限　英　　語　(90 分)

〈注意事項〉

1. 試験開始の合図があるまで，問題冊子を開かないこと。
2. 解答はすべて解答用紙に記入しなさい。
3. マークシート解答方法については以下の注意事項を読みなさい。

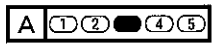
マークシート解答方法についての注意

マークシート解答では，鉛筆でマークしたものを機械が直接読みとって採点する。したがって解答はHBの黒鉛筆でマークすること(万年筆，ボールペン，シャープペンシルなどを使用しないこと)。

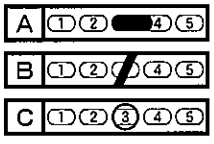
記入上の注意

1. 記入例　　解答を 3 にマークする場合。

(1) 正しいマークの例



(2) 悪いマークの例



枠外にはみださないこと。

○でかこまないこと。

2. 解答を訂正する場合は，消しゴムでよく消してから，あらためてマークすること。
3. 解答用紙をよごしたり，折りまげたりしないこと。
4. 問題に指定された数よりも多くマークしないこと。

問１　(1)から(5)に強勢型が示されている。各々について同じ型になるものを①～⑩のうちから，二つずつ選べ。

(1)  （強弱）　例：Sunday

(2)  （弱強弱弱）　例：unhappiness

(3)  （弱強）　例：allow

(4)  （強弱弱）　例：seventy

(5)  （弱強弱）　例：unhappy

① attempt　② reduce　③ conclusion　④ apologies

⑤ sincerity　⑥ quantity　⑦ private　⑧ successful

⑨ interview　⑩ colleagues

問２　次の(1)から(5)の空欄に入れるのに最も適切なものを，それぞれ①～④のうちから一つずつ選べ。

(1) His statement is [　　] misunderstanding.

① like to cause　② like to causing

③ likely to causing　④ likely to cause

(2) I took the woman's advice and looked for work [　　].

① being paid on the hour　② paid by the hour

③ got paid for the hour　④ get paid with the hour

(3) When it comes to [　　], everybody becomes very careful.

① with houses bought　② buy houses

③ buying houses　④ in buying houses

(4) Have you seen John lately? I haven't seen him [　　] a month.

① during　② since　③ for　④ at

(5) "How [　　] does it take to come to school?" "One hour and a half."

① much　② often　③ far　④ long

問3　次の文章の(1)から(5)に入れるのに最も適切なものを，それぞれ下の①～④のうちから一つずつ選べ。

What Is Excellence?

Whenever I meet business leaders, I take the opportunity to ask them two questions: (a) What does excellence mean to you? and (b) Do you think you've achieved it? Two truths emerge. First, no two people define excellence exactly the same way. Their definitions evolve as they learn and as circumstances change. Second, nearly everyone agrees that excellence is a journey, not a destination. [(1)]

After many years, I've finally come to see that excellence requires continuous balance between strategy and execution. Strategy requires choosing what promises to make to all investors and a roadmap for delivering promised benefits. Execution requires *getting there* while overcoming an unending number of surprises. Of the two, execution is far more difficult to achieve, but it is impossible without solid strategy. [(2)] This is why excellence is a journey that never ends. Everyone, however, doesn't see it that way.

To illustrate, let me tell you one story. I was speaking to a large gathering recently, and, after I asked these two questions ("What is excellence?" and "Have you achieved it?") to the assembly, one woman said she had achieved excellence. [(3)]

I learned that she ran a fairly small business that provided cleaning equipment, and she was very happy because sales had almost doubled in the last thirty days. I asked if she knew why, but she didn't. It turned out this sudden increase in sales occurred three weeks after a flood in the area. [(4)]

I walked away wondering about her notion of excellence, and whether she'd think her organization was excellent in twelve months. I recognized this short-term way of thinking only because [(5)]

(1)

① Thus, excellence means a question two people will never ask at the same time.

② As a result, no one who's serious about excellence believes he or she is "there" yet.

③ Third, hardly anyone would question the importance of being excellent.

④ Therefore, as circumstances change, many people will reach the destination.

(2)

① Learning how to continually balance these two is the key to excellence.

② To make such a continuous journey would require hard work and patience.

③ The reason is that it will take a long time even with a good strategy to achieve the two.

④ Everyone knows excellence is a continuous journey and we should keep trying.

(3)

① This response was highly unusual.

② My story was illustrated by the woman.

③ The news that she had achieved excellence was what I expected.

④ It was obvious that she was a great businesswoman who ran a large company.

(4)

① I believe one of today's key management requirements is a short-term way of thinking.

② But she didn't believe this was the reason, thinking her good fortune was a mark of excellence.

③ She believed that the flood was the reason for the sudden success in her business.

④ I had no doubt about her success, and never questioned her notion of excellence.

(5)

① I used to doubt if I would ever succeed in my journey to achieve excellence.

② I believed her business would be successful again after twelve months.

③ I knew that she had achieved excellence by balancing strategy and execution.

④ I had often been in the same position in my life as a business owner.

問4　次の文章中(1)から(5)の下線部と文脈上最も近い意味を持つものを①～④のうちから一つずつ選べ。

Design Principles for Visual Communication

Visual communication via diagrams, sketches, charts, photographs, video, and animation is fundamental to the process of exploring concepts and spreading information. The most effective visualizations take advantage of the human **facility**(1) for processing visual information, as a result improving understanding, memory, and thinking. Such visualizations help analysts quickly find patterns **lurking**(2) within large data sets and help audiences quickly understand complex ideas.

Skilled visual designers **manipulate**(3) the way people look at and think about visual objects by carefully applying principles of good design. These principles explain how visual techniques can be used to either emphasize important information or hide **irrelevant**(4) details; for example, the most important information in a subway map is the sequence of stops that allow passengers to change lines. Most subway passengers do not need to know the true geographic path of each line. Based on this insight, map designer Harry Beck redesigned the map of the London subway system in 1933 using two main principles: straightening the subway lines and evenly **spacing**(5) the stops to visually emphasize the sequence of stops and transfer points.

(1)	①	service	②	ease	③	equipment	④	ability
(2)	①	reading	②	stealing	③	maintaining	④	hiding
(3)	①	produce	②	estimate	③	control	④	allow
(4)	①	non-specific			②	inaccurate		
	③	not further			④	unrelated		
(5)	①	changing			②	arranging		
	③	replacing			④	seizing		

問5　次の(1)から(5)の各々の文が最も適切な英語の文章になるように，空欄 ア ～ ノ に入る語句を①～⑤のうちから一つずつ選べ。

(1) The list of soccer teams ア イ ウ エ オ scored by each team.

① points　② sorted　③ is
④ in order　⑤ of

(2) One of the problems we face カ キ ク ケ コ to handle the disaster.

① how　② be able　③ is
④ we　⑤ will

(3) His story is [サ] [シ] [ス] [セ] [ソ] it.

① believe ② I ③ so unrealistic

④ cannot ⑤ that

(4) This rule [タ] [チ] [ツ] [テ] [ト] under eighteen years of age.

① to ② should ③ applied

④ everyone ⑤ be

(5) Let [ナ] [ニ] [ヌ] [ネ] [ノ] we can all understand.

① everything ② clear ③ us

④ so that ⑤ make

問6 次の会話(1)から(5)の空欄に入れるのに最も適切なものを，それぞれ①～④のうちから一つずつ選べ。

(1) Ben: When's our bus coming?

Kristi: It's late — it should have been here 10 minutes ago.

Ben: Oh, look, here it is now.

Kristi: [　　] ! I thought it would never arrive.

① At the end

② In the end

③ Lastly

④ At last

(2) Ray: Your English is great!

Yuki: Well, actually, I spent two years in Los Angeles when I was at high school.

Ray: Oh, [　　] you speak so well!

① never mind

② what a surprise

③ how come

④ no wonder

(3) Sandra: Goodbye! It was lovely to see you again.

Asuka: Thanks. I enjoyed staying with you.

Sandra: [ ] !

Asuka: OK, I've got your phone number.

① Another time

② Nice to meet you

③ Keep in touch

④ Hold the line

(4) George: Where's your car? I didn't see it outside.

Kevin: No, it's being repaired. I won't get it back for another week or so.

George: Oh, no! That's too bad!

Kevin: [ ] , it's good, because I get more exercise when I have to walk.

① That's right

② It can't be helped

③ In a way

④ You bet

(5) Maggie: Have you got a picture of your daughter?

Luis: No, I'm afraid I don't have one.

Maggie: What's she like?

Luis: Well, she's tall . . . and [ ] shy.

① so-and-so

② little

③ kind of

④ ever such a

問7　次の文章と表を参考に以下の問題(1)から(5)に答えよ。解答は空欄の ア ～ ニ に適切な数字を解答群から選べ。

(各空欄は右詰で余った上位の桁には⑩と解答せよ。たとえば，空欄 ク ケ コ が2桁の数字40の時は040とし，ク ケ コ にそれぞれ⑩，④，⑩とマークする。)

ア から ニ の解答群

① 1	② 2	③ 3	④ 4	⑤ 5
⑥ 6	⑦ 7	⑧ 8	⑨ 9	⑩ 0

If you were at a pizza parlor that sold one size of pizza and seven toppings were available (mushroom, sausage, pepperoni, onion, pepper, anchovies, and tuna), how many different kinds of pizza could you order? To solve this problem, we can use *binary numbers*[*1] consisting of seven *bits*[*2], one for each topping. We can represent any particular kind of pizza by a seven-bit binary number, in which each topping's bit tells us whether or not that topping is present on the pizza (1 = topping is on the pizza, 0 = topping is off the pizza). Thus, a combination of all seven bits off (0000000) represents a pizza with no topping on it, while a combination of all seven bits on (1111111) represents a pizza with all the toppings. It should be clear that the number of different kinds of pizza is the same as the number of combinations of seven bits. This number of combinations (0000000～1111111) is $2^7 = 128$. The binary number 1010001[*3] shown in Table 1 below is equal to the *decimal number*[*4] 81.

Table 1: The Combination of Topping Bits 1010001 Representing a Pizza with Mushroom, Pepperoni, and Tuna

1	0	1	0	0	0	1
mushroom	sausage	pepperoni	onion	pepper	anchovy	tuna

*1 binary number：二進数

*2 bit：ビット。二進数で1ビットは0又は1になる。

*3 2進数1010001は，10進数で $1 \times 2^6 + 0 \times 2^5 + 1 \times 2^4 + 0 \times 2^3 + 0 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 = 81$ となる。

*4 decimal number：十進数

(1) According to Table 1, a combination of seven bits represents one of the possible pizza variations. If a customer ordered a pizza with mushroom, sausage, and onion,

a. What seven-bit binary number would represent the requested pizza?

[ア] [イ] [ウ] [エ] [オ] [カ] [キ]

b. Write the corresponding decimal number.

[ク] [ケ] [コ]

(2) If sausage and anchovy cannot be ordered on Fridays, how many different kinds of pizza can be ordered on Fridays? Write your answer as a decimal number.

[サ] [シ] [ス]

(3) If the pizzas have three sizes (large, medium, and small), how many different pizza variations are possible? Write your answer as a decimal number.

[セ] [ソ] [タ]

(4) Similar to the pizza parlor, there is a car dealer that sells cars with choices of optional features, such as navigator, roof window, and leather seats. How many combinations of options are possible on a car that has nine optional features? Write your answer as a decimal number.

[チ] [ツ] [テ]

(5) On a TV variety show, there is a weekly movie review corner. Tom, Betty, and Mike are in charge of reviewing movies. Each of them gives each of the three movies a "thumbs up" (positive review) or a "thumbs down" (negative review). On a particular show, how many different combinations of reviews are possible? Write your answer as a decimal number.

[ト] [ナ] [ニ]

問8　次の文章を読み，(1)から(6)の質問の答えとして最も適切なものを①～④のうちから一つずつ選べ。

From news media to email accounts to online entertainment, most of the websites we enjoy on the World Wide Web are free to users because they are paid for by advertising. Any website you find will probably show advertisements, which you can click on to go to another company's website. Now, with the popularity of online social networking sites such as Facebook, Twitter, and MySpace, marketing people are looking for ways to make money from these ever-popular sites. Interestingly, however, traditional online advertising doesn't seem to be the answer, and recent Harvard University studies are helping to explain why.

Trends in Social Networking

Harvard Business School professor Mikolaj Jan Piskorski has spent years studying users of online social networks, and he has developed key findings about the needs that these networks fulfill. For example, when friends are hard to contact, you can just log onto Facebook or Twitter, check their "status" and quickly see what they are doing.

Piskorski has also found differences in trends between male and female users. The most common use of social network sites is by men looking at women they don't know, followed by men looking at women they do know.

Women look at other women they know. Overall, women receive two-thirds of all page views. With written messages, there are also differences between men and women. "Women actually say things themselves; guys write about what other people say," says Piskorski.

But perhaps the biggest discovery of Piskorski's research was pictures. "People just love to look at pictures," says Piskorski. "That's the most popular feature of all online social networks." Why are photos so popular? Piskorski suggests that people who post pictures of themselves can show they are having fun and are popular without having to say so openly. Another attraction of photos (and of social networking sites in general) is that they allow you to look into other people's private lives. Normally it is considered rude to look into other people's lives. But online networking provides "a very delicate way for me to look into your life without really being impolite," the researcher says.

From Social Media to Social Strategy

Corporate marketing people often have difficulty in understanding how to use social networking sites to reach potential customers. Following the success of Google, social networking sites such as Facebook have been trying an advertising-based business model, but this model has had only limited success. The problem is that business people think of online social networks as media and treat them as another way to get people to go to a website. Research shows that, in general, the proportion of people who click on advertisements on social networking sites is extremely low — simply because people don't go to these sites to find information about specific products. Just as in ordinary life, people do not like to be interrupted while socializing through online networks.

Sunil Gupta, Head of the Marketing Department at Harvard Business School and professor of Digital Marketing Strategy, explains the problem

with this kind of advertising. "Imagine sitting at a table with friends when a stranger pulls up a chair, sits down, and tries to sell you something while you are talking to your friends. One will not have much success with a strategy like this." A social network can be an ideal online meeting place for people who want to buy and sell things, but marketing people must understand the particular needs of consumers in these situations. "To be successful," says Gupta, "as a marketing person, you need to change your way of thinking. Marketing on social networks is not like marketing in the traditional media like television and newspapers; it requires a social strategy. A good social strategy uses the same principles that first made online social networks attractive — by solving social problems in the offline world. Companies should begin to do the same and help people fulfill their social needs online." Gupta suggests the following: "You should come to the table and say, 'Here is a product that I have designed for you that is going to help you all become better friends.' To achieve this, companies will need to start making changes to the products themselves to make them more social, and take advantage of the way groups interact, using technologies such as Facebook Connect."

While online social networking trends suggest the promise of an overall change in online marketing strategy, Gupta says there hasn't been much change yet. "I still see businesses saying, 'Let's talk to people on Twitter or let's have a Facebook page, or let's advertise.' These are good first steps," says Gupta, "but they are nowhere close to a social strategy."

(1) What is the most appropriate title for the article?

① Recent Harvard University Research on Corporate Marketing

② Male-Female Differences in Social Networking

③ The Strategic Use of Social Networking

④ How Social Networking Sites Have Changed Online Advertising

(2) Why are there so many advertisements online?

① Companies use them to take users away from their competitors' websites.

② Traditional offline advertising has been largely unsuccessful.

③ Social networking sites such as Facebook and Twitter have made them popular.

④ They allow website owners to provide content without charging users.

(3) According to Piskorski's research, which of the following is **not** a difference between male and female users of social networks?

① Two-thirds of those who view social networking pages are women.

② More users look at women than at men.

③ Men tend to look at women they don't know.

④ Men tend to refer more to what other people have said or done.

(4) Why are photographs so popular on social networking sites?

① They allow you to show others that your private life is polite.

② They allow you to look at people who have a less interesting life.

③ They allow you to make fun of other people without being rude.

④ They allow you to show others that you have an enjoyable life.

(5) According to the article, why have many corporate marketing people been unsuccessful in reaching customers through social networking sites?

① When people are socializing, they tend to ignore advertisements.

② The products they advertise are suited to the daily lives of social network users.

③ Many users are afraid to interact with strangers online.

④ The number of online advertisements is too large.

(6) How does Sunil Gupta think that marketing people can successfully sell products on social networks?

① By using Facebook Connect and similar technologies to change the products

② By designing products that meet specific social needs of network users

③ By adopting a businesslike attitude when customers approach their table

④ By developing a strategy that treats social networks like other media